

## WHAT IS CLAIMED IS:

1. A communication management system comprising:

    a terminal of a user;

    an authentication server which authenticates the terminal; and

    a management server which manages network address which uniquely identifies the terminal on a network, the terminal comprising:

        a holding unit which holds a device ID which is specifically assigned to the terminal in such a manner as to uniquely identify the terminal;

        an authentication request unit which reads the device ID from the holding unit, and sends the device ID to the authentication server to make a request for authentication;

        a certificate acquisition unit which acquires a certificate, which certifies success in the authentication, from the authentication server; and

        a registration request unit which sends the certificate to the management server, to make a request for registration of the network address, which is assigned to the own terminal,

    the authentication server comprising:

        an authentication reception unit which acquires the device ID from the terminal and receives the request for

the authentication;

an authentication unit which authenticates the correctness of the device ID of the terminal; and

a certificate issue unit which issues a certificate when succeeding in the authentication of the terminal,

the management server comprising:

a database which holds an ID which uniquely identifies the terminal, and the network address in a manner that they are associated with each other;

a registration reception unit which acquires the certificate from the terminal, and receives the request for registration of the network address of the terminal;

a registration unit which verifies the correctness of the certificate, and registers the ID and the network address of the terminal in the database when the certificate is confirmed to be correct;

an inquiry reception unit which receives the request for inquiring the network address of the terminal;

a search unit which searches through the database on the basis of the ID of the terminal as the target of an inquiry, to acquire the network address of the terminal; and

an answer unit which answers search result.

2. The communication management system according to claim 1,

wherein

the holding unit holds the device ID in such a manner that the device ID is un-rewritable from outside.

3. The communication management system according to claim 1, wherein

the authentication server further comprises an ID issue unit which issues an ID for uniquely identifying the terminal when succeeding in authentication of the terminal, wherein

the registration reception unit receives the ID from the terminal, the ID being issued by the ID issue unit to the terminal, and

the registration unit registers the ID, issued by the ID issue unit to the terminal, and the network address in the database.

4. The communication management system according to claim 1, wherein

the management server further comprises a group database which holds information related to a group including a plurality of the terminals, wherein

the inquiry reception unit receives a request for an inquiry about the group, and

the search unit searches through the group database on the basis of the request for the inquiry.

5. The communication management system according to claim 1, wherein

the management server further comprises a matching control unit which controls matching of a communication partner between the terminals, wherein

the inquiry reception unit receives a requirement for the communication partner, and

the search unit searches through the database on the basis of the requirement, and

the matching control unit determines the communication partner on the basis of search result, and

the answer unit answers the communication partner.

6. A method for managing communication comprising:

reading a device ID by a terminal of a user, the device ID unique to the terminal being held in a memory in the terminal;

sending the device ID from the terminal to an authentication server for authenticating the terminal;

authenticating the correctness of the device ID by the authentication server;

issuing a certificate for certifying success in authentication by the authentication server, when succeeding in the authentication;

sending the certificate from the authentication server

to the terminal;

sending the certificate from the terminal to a management server, the management server managing a network address for uniquely identifying the terminal on a network;

verifying the certificate by the management server;  
and

storing an ID for uniquely identifying the terminal and the network address in a database by the management server, in a manner that they are associated with each other, when the certificate is confirmed to be correct.

7. The method according to claim 6, wherein

steps from reading the device ID to storing in the database are automatically carried out without involvement by a user.

8. The method according to claim 6 further comprising:

receiving a request for an inquiry about the network address of the terminal by the management server;

searching through the database on the basis of the ID of the terminal by the management server, to acquire the network address of the terminal; and

answering the network address by the management server.

9. A terminal device comprising:

a holding unit which holds a specific device ID, the

device ID being assigned so as to uniquely identify the terminal device itself;

an authentication request unit which reads the device ID from the holding unit, and sends the device ID to an authentication server which authenticates the terminal, to make a request for authentication;

a certificate acquisition unit which acquires a certificate, which certifies success in the authentication, from the authentication server; and

a registration request unit which sends the certificate to a management server which manages a network address for uniquely identifying the terminal device on a network, to make a request for registration of the network address assigned to the own terminal device.

10. A method for managing communication comprising:

reading a specific device ID from a memory, the device ID being assigned so as to uniquely identify a terminal;

sending the device ID to an authentication server which authenticates the terminal, to make a request for authentication;

acquiring a certificate, which certifies success in the authentication, from the authentication server; and

sending the certificate to a management server which manages a network address for uniquely identifying the terminal on a network, in order to make a request for

registration of the network address assigned to the terminal.

11. The method according to claim 10, further comprising, prior to the step of sending the certificate to make the request for registration:

making a request of a connection server for mediating connection to the network to connect the terminal to the network; and

acquiring the network address assigned by the connection server to the terminal,

wherein, in the step of sending the certificate to make the request for registration, registration of the network address assigned by the connection server is required.

12. A computer program which makes a computer carry out:

a function of reading a specific device ID from a memory, the device ID being assigned so as to uniquely identify a terminal;

a function of sending the device ID to an authentication server which authenticates the terminal, to make a request for authentication;

a function of acquiring a certificate, which certifies success in the authentication, from the authentication server; and

a function of sending the certificate to a management

server which manages a network address for uniquely identifying the terminal on a network, in order to make a request for registration of the network address assigned to the terminal.

13. A computer-readable recording medium which stores a program to make a computer carry out:

- a function of reading a specific device ID from a memory, the device ID being assigned so as to uniquely identify a terminal;

- a function of sending the device ID to an authentication server which authenticates the terminal, to make a request for authentication;

- a function of acquiring a certificate, which certifies success in the authentication, from the authentication server; and

- a function of sending the certificate to a management server which manages a network address for uniquely identifying the terminal on a network, in order to make a request for registration of the network address assigned to the terminal.

14. A management server comprising:

- a database which holds an ID for uniquely identifying a terminal and a network address of the terminal in a manner that they are associated with each other;



a registration reception unit which acquires a certificate from the terminal and receives a request for registration of the network address of the terminal, the certificate being issued by an authentication server which authenticates the terminal to certify success in authentication of the terminal;

a registration unit which verifies the correctness of the certificate, and registers the ID and the network address of the terminal in the database, when the certificate is confirmed to be correct;

an inquiry reception unit which receives a request for an inquiry about the network address of the terminal;

a search unit which searches through the database on the basis of the ID of the terminal as the target of the inquiry, to acquire the network address of the terminal; and

an answer unit which answers search result.

15. A method for managing communication comprising:

acquiring a certificate from a terminal, and receiving a request for registering a network address of the terminal, the certificate being issued by an authentication server which authenticates the terminal to certify success in authentication of the terminal;

verifying the correctness of the certificate, and registering an ID for uniquely identifying the terminal and the network address of the terminal in a database, when the

certificate is confirmed to be correct;

receiving a request for an inquiry about the network address of the terminal;

searching through the database on the basis of the ID of the terminal as the target of the inquiry, to acquire the network address of the terminal; and

answering search result.

16. A computer program which makes a computer carry out:

a function of acquiring a certificate from a terminal, and receiving a request for registering a network address of the terminal, the certificate being issued by an authentication server which authenticates the terminal to certify success in authentication of the terminal;

a function of verifying the correctness of the certificate, and registering an ID for uniquely identifying the terminal and the network address of the terminal in a database, when the certificate is confirmed to be correct;

a function of receiving a request for an inquiry about the network address of the terminal;

a function of searching through the database on the basis of the ID of the terminal as the target of the inquiry, to acquire the network address of the terminal; and

a function of answering search result.

17. A computer-readable recording medium which stores a

program to make a computer carry out:

a function of acquiring a certificate from a terminal, and receiving a request for registering a network address of the terminal, the certificate being issued by an authentication server which authenticates the terminal to certify success in authentication of the terminal;

a function of verifying the correctness of the certificate, and registering an ID for uniquely identifying the terminal and the network address of the terminal in a database, when the certificate is confirmed to be correct;

a function of receiving a request for an inquiry about the network address of the terminal;

a function of searching through the database on the basis of the ID of the terminal as the target of the inquiry, to acquire the network address of the terminal; and

a function of answering search result.